

What is Claimed is:

1. An apparatus for inserting a portion of a stretch of a pre-wound coil into a slot of a dynamoelectric machine component, the machine component having a bore, the apparatus comprising:

5 a ram having a longitudinal axis, the ram configured to insert the portion of the stretch into the bore; and

10 a pushing member configured to push the portion of the stretch into the slot by moving from a first position to a second position, the first and second positions separated by a displacement having a circumferential component with respect to the axis.

2. The apparatus defined by claim 1 wherein:

the ram has a maximum radial extent; and

5 a portion of the pushing member is disposed at a position closer to the axis than the maximum radial extent when the pushing member is in the first position.

3. The apparatus defined by claim 1 further comprising at least one stationary blade configured to support the machine component.

4. The apparatus defined by claim 1 further comprising a moveable blade configured to moveably support the portion of the stretch when the ram inserts the portion into the bore.

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5. The apparatus defined by claim 1 further comprising a moveable blade wherein the pushing member is moveably attached to the moveable blade.

6. The apparatus defined by claim 1 further comprising at least one forming tool configured to press a portion of the coil into a desired form.

7. The apparatus defined by claim 6 further comprising a reaction die disposed opposite the forming tool, wherein the reaction die is configured to compress the portion of the coil.

8. A method for inserting a portion of a stretch of a pre-wound coil into a slot of a dynamoelectric machine component, the machine component having a bore and a longitudinal axis, the method  
5 comprising:

inserting the portion of the stretch into the bore; and

pushing the portion of the stretch into the slot in a direction having a circumferential  
10 component with respect to the axis.

9. The method defined by claim 8 wherein the inserting comprises:

pushing the portion of the stretch into the bore; and

5 guiding the coil with a stationary blade.

10. The method of claim 8 further comprising pressing a portion of the coil into a desired form.

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11. The method of claim 10 further comprising compressing the portion of the coil.

12. The method defined by claim 8 further comprising positioning a pushing member in the bore using a moveable blade.

13. The method defined by claim 8 further comprising moveably supporting the coil using a moveable blade during the inserting.

14. The method defined by claim 8 further comprising, when the coil has leads, terminating the leads.

15. An apparatus for inserting a portion of a stretch of a pre-wound coil into a slot of a dynamoelectric machine component, the machine component having a bore and a longitudinal axis, the slot having a bottom and an opening, the opening facing a direction having a circumferential component with respect to the axis, the apparatus comprising:

a ram configured to insert the portion of the stretch into the bore; and

10 a pushing member configured to push the portion toward the bottom of the slot.

16. The apparatus defined by claim 15 wherein:

the ram has a maximum radial extent; and

a portion of the pushing member is disposed at a position closer to the axis than the

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- 5 maximum radial extent when the pushing member is in the first position.

17. The apparatus defined by claim 15 further comprising at least one stationary blade configured to support the machine component.

18. The apparatus defined by claim 15 further comprising a moveable blade configured to moveably support the portion of the stretch when the ram inserts the portion into the bore.

19. The apparatus defined by claim 15 further comprising a moveable blade wherein the pushing member is moveably attached to the moveable blade.

20. The apparatus defined by claim 15 further comprising at least one forming tool configured to press a portion of the coil into a desired form.

21. The apparatus defined by claim 20 further comprising a reaction die disposed opposite the forming tool, wherein the reaction die is configured to compress the portion of the coil.

22. A method for inserting a portion of a stretch of a pre-wound coil into a slot of a dynamoelectric machine component, the machine component having a bore and a longitudinal axis, the slot having an opening, the opening facing a direction having a circumferential component with respect to the axis, the method comprising:
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inserting the portion of the stretch into the bore; and

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10                   pushing the portion of the stretch into  
the slot.

23. The method defined by claim 22 wherein the  
inserting comprises:

pushing the portion of the stretch into  
the bore; and

5                   guiding the coil with a stationary blade.

24. The method of claim 22 further comprising  
pressing a portion of the coil into a desired form.

25. The method of claim 24 further comprising  
compressing the portion of the coil.

26. The method defined by claim 22 further  
comprising positioning a pushing member in the bore using  
a moveable blade.

27. The method defined by claim 22 further  
comprising moveably supporting the coil using a moveable  
blade during the inserting.

28. The method defined by claim 22 further  
comprising, when the coil has leads, terminating the  
leads.

29. An apparatus for inserting a portion of a  
stretch of a pre-wound coil into a slot of a  
dynamoelectric machine component, the machine component  
having a bore, the apparatus comprising:

5                   a ram having a longitudinal axis, the ram  
configured to insert the portion of the stretch into the  
bore;

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10 a pushing member configured to push the  
portion of the stretch into the slot by moving from a  
first position to a second position, the first and second  
positions separated by a displacement having a  
circumferential component with respect to the axis; and

a blade configured to support the portion  
of the stretch;

15 wherein:

as the pushing member moves from the first  
position to the second position, the pushing member is  
radially outside the blade.

30. The apparatus defined by claim 29 further  
comprising at least one forming tool configured to press  
a portion of the coil into a desired form.

31. The apparatus defined by claim 30 further  
comprising a reaction die disposed opposite the forming  
tool, wherein the reaction die is configured to compress  
the portion of the coil.

32. A method for inserting a coil into a  
dynamoelectric machine component, the machine component  
having a bore, a slot, and a longitudinal axis, the  
method comprising:

5 placing the coil onto an insertion tool;

inserting a portion of a stretch of the  
coil into the bore; and

10 pushing the portion of the stretch into  
the slot in a direction having a circumferential  
component with respect to the axis.

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33. The method defined by claim 32 further comprising winding the coil outside the machine component.

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